

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF COMMERCIAL FISHERIES

CALIFORNIA FISHERY MARKET NEWS MONTHLY SUMMARY

December 1963

Part II—Fishing Information*

Sea-surface temperatures, fishing and research information
of interest to the West Coast tuna-fishing industry
and marine scientists

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* Part I - "Fishery Products Production and Market Data" is issued by the Bureau of Commercial Fisheries, Market News Service, Post Office Building, San Pedro, California

TOPOGRAPHIC CHARTS

Topographic Charts No. 13, 14, and 15 which show seamounts and protuberances rising above the ocean floor from 3°N. to 10°N. latitude and from 80°W. to 110°W. longitude were printed in December. Charts may be obtained from Inter-American Tropical Tuna Commission representatives or by writing directly to our San Diego address.

SEA SURFACE TEMPERATURE CHARTS, EASTERN PACIFIC OCEAN DECEMBER 1963

Acknowledgments

The following organizations and stations contributed data for the December 1963 charts:

U.S. Weather Bureau, San Diego, California
U.S. Naval Communication Station Balboa, Fort Amador,
Canal Zone
U.S. Weather Bureau Port Meteorological Office, Cristobal,
Canal Zone
California Department of Fish and Game, R/V N.B. Scofield
Guadalupe Island, Coronado Island, Ensenada, Cedros Island
and Almejas Bay by Pedro Mercado of the Universidad
Autonoma de Baja California, Ensenada, Mexico
Hopkins Marine Station, Pacific Grove, California by
J. P. Balesteri
Instituto de Investigacion de Los Recursos Marinos, Callao,
Peru
Inter-American Geodetic Survey by Rene Cortes at Salina Cruz,
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at Tumaco, Colombia; N. Zambrano at San Cristobal,
Galapagos; S. Valenzuela at La Libertad, Ecuador;
L. Meza and E. Lopez at Talara, Peru; Juan Andia at
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Inter-American Tropical Tuna Commission, La Jolla and
Terminal Island, California
Kelco Company, San Diego, California
Lifeguard Headquarters, Newport Beach, California

Pacific Oceanographic Group, Nanaimo, British Columbia, by
H. J. Hollister from observations by R. W. Collins at
Quatsino Lightstation; D. B. Jones at Cape St. James
Light; B. Stuart at Amphitrite Point Light;
R. A. Smith at Langara Island Light
Scripps Institution of Oceanography, La Jolla, California
by Margaret Robinson and Hans Klein

Charts

Figure 1.--Mean sea surface temperatures ($^{\circ}\text{F}$) derived from approximately 8000 observations. Squares show temperatures at weather-ship stations. Numerals on shore are temperatures at coastal and light-ship stations.

Figure 2.--Deviation of sea surface temperatures ($^{\circ}\text{F}$) from long term charts of H.O. 225. Hatched areas are colder than mean.

Figure 3.--Deviation of sea surface temperatures ($^{\circ}\text{F}$) from those of December 1962. Hatched areas are colder than 1962.

Figure 4.--Sea surface temperatures ($^{\circ}\text{F}$) by 1-degree squares, approximately 2000 observations. Line under temperatures indicates average of two or more observations. Numerals on shore are temperatures at coastal stations.

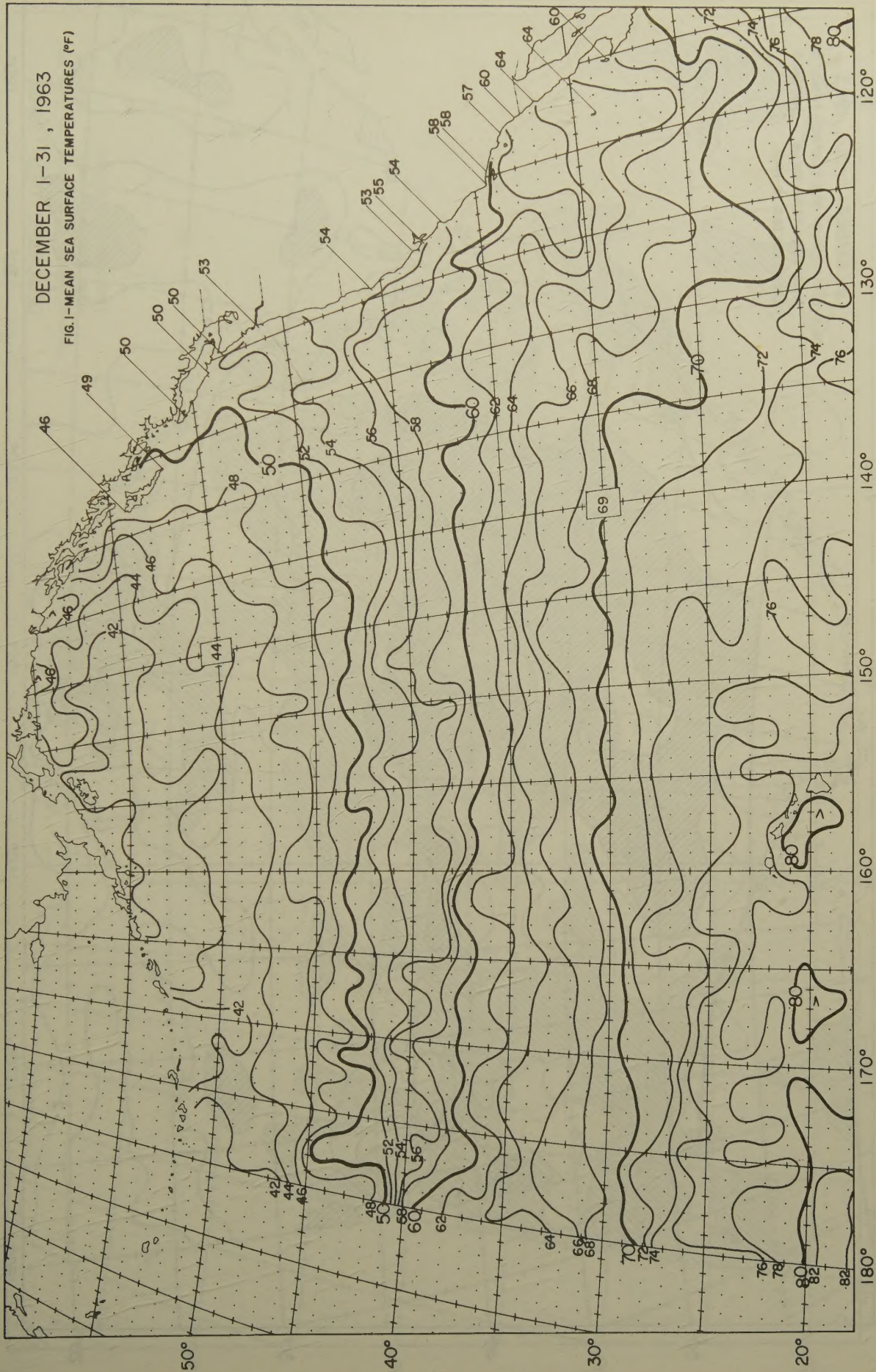
Figure 5.--Deviation of sea surface temperatures ($^{\circ}\text{F}$) December 1963-December 1962 by 1-degree squares. Shaded areas are colder than 1962.

Figure 6.--Deviation of sea surface temperatures ($^{\circ}\text{F}$) from 12-year mean (1947-1958) by 2-degree squares. Shaded areas are colder than 1962.

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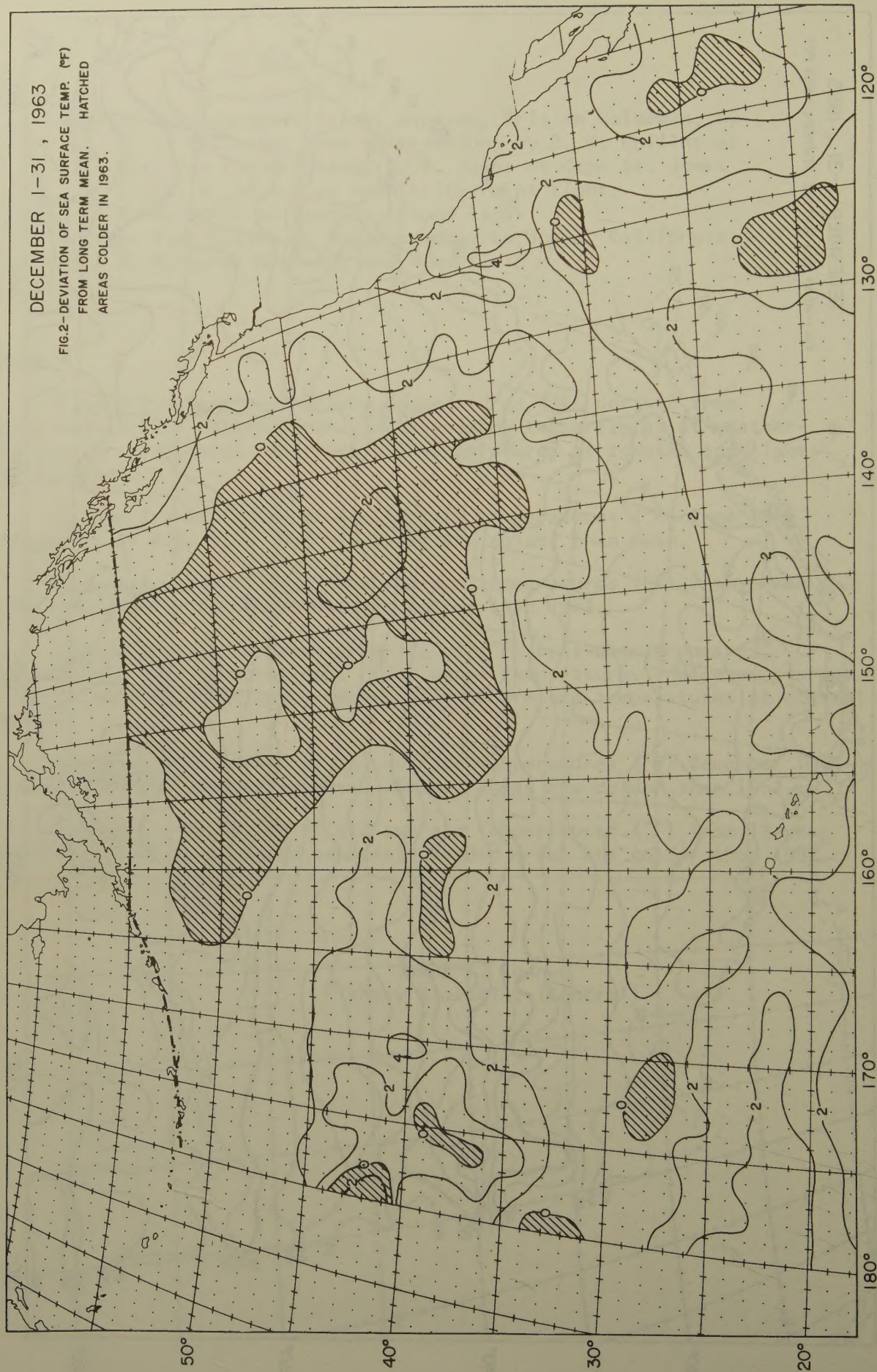
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FIG. 1-MEAN SEA SURFACE TEMPERATURES (°F)



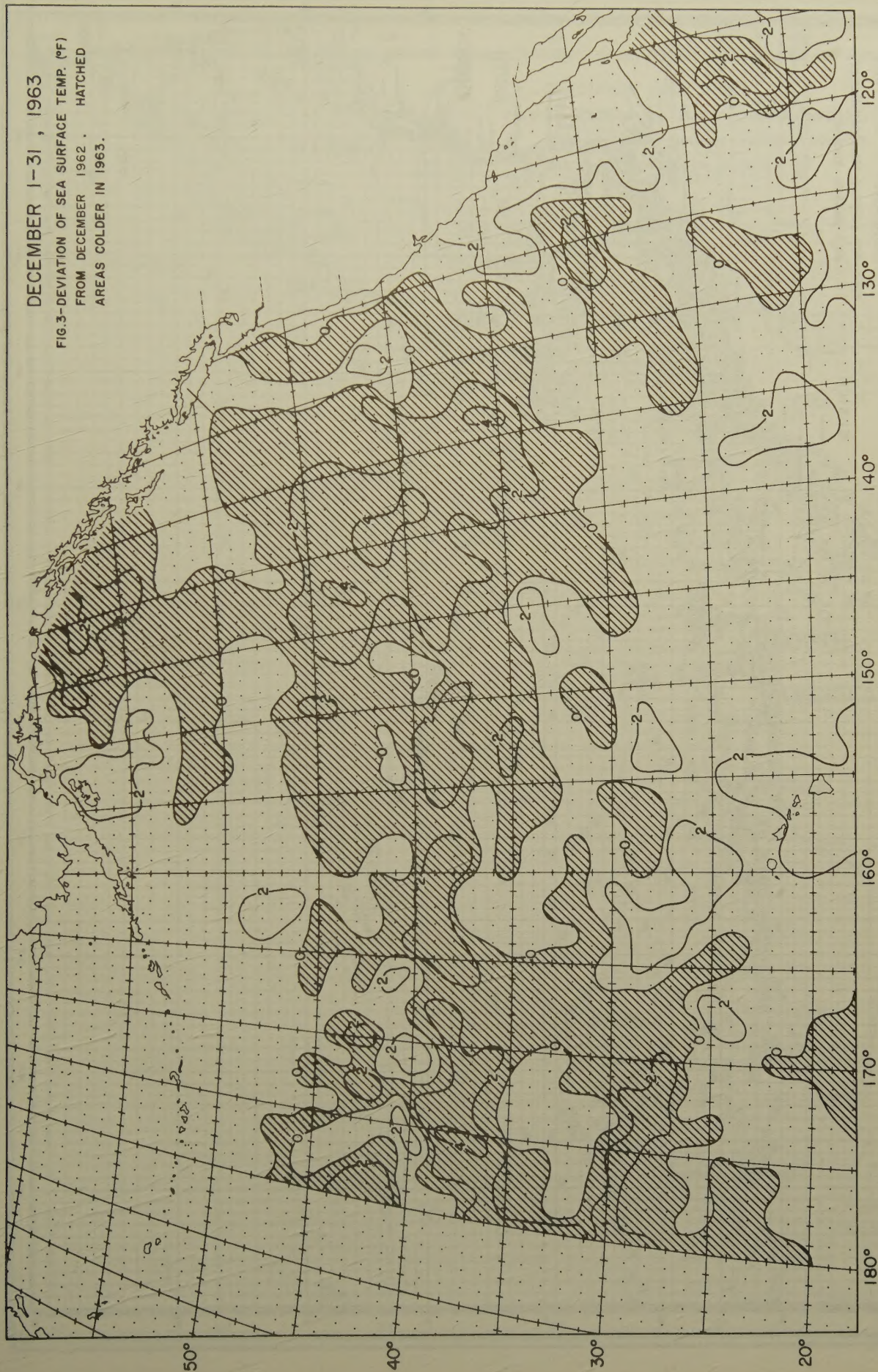
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FIG. 2- DEVIATION OF SEA SURFACE TEMP. (°F)
FROM LONG TERM MEAN. HATCHED
AREAS COLDER IN 1963.



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FIG. 3-DEVIATION OF SEA SURFACE TEMP. (°F)
FROM DECEMBER 1962. HATCHED
AREAS COLDER IN 1963.



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FIG.4-SEA SURFACE TEMPERATURES (°F)
BY 1-DEGREE SQUARES.

